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Getting an NIH Grant: New Data Show Odds Worsening

For gauging the odds in the great Bethesda craps shoot, the indispensable manual is a little-known assemblage of data, *DRG Peer Review Trends: Workload and Actions of DRG Study Sections, 1975-85*, a production of the Division of Research Grants, the croupier of the National Institutes of Health.

Available upon request (see P. 4 for ordering information), but never publicized, the latest edition consists of 109 statistics-packed pages detailing the dour realities of the competitive world of NIH grants. For example, *Trends* records the boom in grant applications that are "approved but unfunded," NIH's way of saying, "Close but no cigar." Thus, the report notes that while the number of competing applications for individual grants rose from 9647 in 1975 to 15,496 in 1985, the number that received NIH funding increased from 4282 to merely 5016. Meanwhile,

"approved but unfunded" applications increased over three-fold, from 2914 in 1975 to 9140 in 1985.

The DRG offers the following observation: "The present 2 to 1 odds against an RO1 [the NIH designation for an individual grant] applicant being funded by NIH are bound to have an impact on both the applicant and the reviewer." The applicants are responding to the harsh competition by investing additional efforts in the woeful task of rehashing applications that didn't make it the first time. This is reflected in a surge of amended applications. "By 1985," the DRG reports, "one-fourth of the 5016 funded applications were the result of amendments, compared to only 13 percent as recently as 1981."

Meanwhile, the reviewers, naturally disposed to see money going to projects they favor, have re-

(Continued on page 4)

House Committee Weighs Inquiry On Reported Disarray in OSTP

A House oversight hearing on the White House Office of Science and Technology Policy (OSTP) is under consideration as reports mount about rapid staff turnovers, confusion, and sunken morale in what's supposed to be the policy-making center of American science.

Several grating episodes have fueled interest in such a hearing. The latest occurred October 7, when OSTP Director William R. Graham failed to attend or send a substitute to a long-planned joint hearing on superconductivity held by two subcommittees of the House Science, Space, and Technology Committee.

The hearing, before the Subcommittee on Transport-

OSTP Guards its Staff Roster---P. 2

R&D Jobs Slump, Pay Sluggish---P. 8

tation, Aviation, and Materials and the Subcommittee on Science, Research, and Technology, reflected a standard tension in Congressional-Executive relations: The Science Committee members feel that the White House is dawdling on important sci-tech issues—superconductivity, in this case—and have dished up several bills (HR 3024, 3048, and 3217) aimed at increasing and orchestrating federal research programs. The White House insists that, under existing legislation, it has leaped to the challenge and Congress should stay out of the way. The members wanted to discuss those conflicting views

(Continued on page 2)

In Brief

Congress is balking at taking a full first step in the Administration's five-year plan for doubling the NSF budget, to \$3.2 billion in 1992. For fiscal 1988, which began October 1, the Administration requested \$1.893 billion, \$270 million above last year's budget. The full House reduced the requested increase by \$100 million. NSF's Senate Appropriations Subcommittee, chaired by William Proxmire, voted for zero increase, but the full Senate Appropriations Committee reported a bill just \$27 million below the White House request.

The House, reflecting long-standing dismay over the NSF's neglect of science education, voted to give the Education Directorate \$30 million that the Administration had budgeted for NSF's research functions.

But all is well with the NIH budget, which once again is soaring, despite White House efforts to bring it down. Last year's final figure for NIH (after attempted manipulations by the Office of Management and Budget) goes into the record books as \$6.1 billion, plus \$252 million for AIDS. The White House sought to cut it this year to \$5.6 billion and \$422 million for AIDS. The House voted for \$6.5 billion and \$472 million. The Senate Appropriations Committee voted for \$6.8 billion and \$468 million.

And there's another warning of a coming shortage of scientists, "Nurturing Science and Engineering Talent," produced by the Government-University-Industry Roundtable, a subsidiary of the National Academy of Sciences. Copies, without charge, from the Roundtable, NAS, 2101 Constitution Ave. NW, Washington, DC 200418; tel. 202/334-3486.

...A View from Capitol Hill: "OSTP Is a Shambles"

(Continued from page 1)

with the President's Science Adviser.

Congressional sources gave SGR the following account of what happened: Graham was asked by the subcommittees early in August to testify at the superconductivity hearing. A member of Graham's staff called later and said Graham would be unable to attend on that date and asked the subcommittees to reschedule his appearance. But with nine other witnesses set to testify on the originally planned date, the subcommittees requested that an OSTP staff member be sent in Graham's place.

It is not unusual for a deputy or a senior staff member to substitute for the head person at a Congressional hearing. But, according to one source, the initial response from OSTP was, "We don't have anyone we can send." Nonetheless, the subcommittees apparently got the impression that someone from OSTP would testify. Dated October 2, a Science Committee press release announcing the hearing listed among the witnesses a "Representative of Office of Science and Technology Policy." Unlike the listings for other agencies taking part in the hearing, the OSTP representative was not named.

No one from OSTP came to testify. A written statement bearing Graham's name was submitted for the record. But, in the words of one staff member, it "reiterated what we heard" from other Administration witnesses. Missing was the opportunity to question the Science Adviser.

The no-show episode comes at a time when the Graham operation continues to draw poor notices on Capitol Hill and in science-policy circles around Washington. "OSTP is a shambles," a Congressional staff member told SGR. "There's no one in charge, and Graham doesn't communicate with his staff, let alone with the outside."

A common theme among the critical observers is that OSTP has suffered from large-scale staff turnovers since Graham became Director in October 1986—so large, in the words of one Congressional aide, that "there's no corporate memory left there." Working, if not cordial relations, have usually prevailed between the White House Science Office and Congressional committees that handle research and development and related issues. But, according to one exasperated Congressional staff official, "There's nobody that we can communicate with at OSTP." The full roster of the OSTP staff is one of Graham's secrets (see box). But Congressional aides who have had contact with individual members report that there's been an unusual amount of staff traffic, and that an apparently substantial part of the present staff

(Continued on page 3)

OSTP's Secret: Who Works There

The record of OSTP's staffing situation appears to be a matter of great sensitivity to Director Graham. It's so great, in fact, that in his own mini-rendition of White House lawlessness, he has snubbed the Freedom of Information Act (FOI) to withhold information on the traditionally open subject of who works for OSTP and who has left in recent times. Graham's predecessors, dating back to the Kennedy Administration, routinely provided that information to the press upon request, with no quibbles. Not so Graham.

SGR submitted a Freedom of Information request on August 28, asking for OSTP's current roster and departures since Graham's arrival, in October 1986. The requested information does not fall within any of the exemptions allowed under the Act. The Act specifies that, within 10 working days of receipt of a request, a federal agency must reply whether it intends to fulfill the request; it can take additional time of reasonable but unspecified duration beyond that period to gather the data, but the 10-day rule is clear and firm, and is routinely followed by most federal agencies.

By September 23, Graham's office had not responded to the FOI request or to several telephone calls from SGR asking when a response might be expected. So, a letter from SGR's lawyer was sent, reminding Graham that he was overdue in complying with the law. That didn't stir a response, either. On September 30, SGR inquired at the White House Office of Administration, which guides FOI policy for presidential agencies. The response, by telephone on October 2, was that "one of the ladies" in OSTP "is working on it," but would be away until October 6. Three calls to the lady's office on October 6 failed to elicit a reply from her or anyone else about SGR's trivial request.

The next step involved a telephone call on October 7 from SGR counsel to the General Counsel in the White House Office of Administration. He said he would look into the matter, and then phoned back with word that a response from OSTP could be expected within a week.

On October 9, an envelope from Graham's office, postmarked October 8, was delivered to SGR. The letter inside was dated September 23. Signed by a "special assistant," it stated, "We are conducting a search of the OSTP institutional records and will advise you of the results of this review as soon as possible."

That's the last we've heard from the command post of American science policy.

... Graham Now Meets with Press, but Pickings are Lean

(Continued from page 2)

consists of new arrivals detailed from other federal agencies or on appointments under the Intergovernmental Personnel Act.

The House Science, Space, and Technology Committee traditionally opens its new Congressional session in January with a morning-long "Posture Hearing" on the status of national R&D matters, with the President's Science Adviser cast as the star witness. The proceeding, usually polite and far from penetrating, essentially sketches out the issues of concern to the Committee and gets the Science Adviser on record. What's under discussion for Graham's shop, however, is an oversight hearing, which is open-ended in terms of depth and duration. According to one staff member, "early next year" is the talked-of time for holding the hearing. It could be before the full committee or a combination of subcommittees. Of interest is that Chairman Robert A. Roe (D-NJ) of the full Science, Space, and Technology Committee also serves as Chairman of the Subcommittee on Investigations and Oversight.

The Committee sponsored the 1976 resurrection of on-board science advice at the White House after Richard Nixon petulantly abolished the predecessor Office of Science and Technology in 1973. Since then, at both the member and staff level, the Committee has looked upon the presidential science office with high expectations and, usually, a good deal of frustration that it's not performing as powerfully as Congress intended. But the disappointment level has never been higher, particularly in regard to space, science education, and support for building and renovating university laboratories (which the Administration has opposed).

In the long line of presidential Science Advisers, Graham got off to the worst start of all. A right-wing Republican with a background concentrated in military research, he riled the career research bureaucracy when

the White House pushed him into the number two spot at NASA in 1985—over the angry protests of James Beggs, who was then head of the space agency. As recounted in a book on the *Challenger* shuttle accident, *Prescription for Disaster* (Crown Publishers, 1987) by Joseph B. Trento, Beggs unsuccessfully pleaded with the White House to drop Graham's appointment to NASA. Finally, Trento reports, Beggs appealed to Graham, as described in the following passage from the book:

So Beggs called Graham and invited him in for a talk. "I said, 'Look, Bill, I have nothing against you personally. I don't even know you. I have nothing against your background or anything else.' Although I had been warned by this time that the guy was a right-wing kook, a nut, I said, 'I don't know anything about your background, but you are not qualified.' I said, 'I need somebody in this job who is qualified.' I said, 'If I thought you were qualified, I would take you in a minute because you are a nice guy and comb your hair right . . .'"

Asked in a telephone interview with SGR about the accuracy of the quotes, Beggs hesitated on one point. "I don't think I found out until later about the right-wing stuff," he said, but he stood by the rest of the passage.

In any case, when Beggs was forced to resign from NASA to face charges—later dropped—of fraud against the government in his pre-NASA days with General Dynamics, Graham became acting head of NASA, and was in that post in January 1986 when the *Challenger* exploded.

Rejected for a full-fledged appointment as the person to rebuild NASA, Graham was given a consolation prize—the post of Science Adviser to the President, vacant and unwanted by any reasonable prospect since George A. Keyworth II had stepped down at the end of 1985. Graham's Senate confirmation hearing produced three negative votes in committee, the only nays ever cast since the Presidential advisory post became subject to Senate confirmation 25 years before (SGR October 1, 1986).

Since taking office, Graham has been a dim figure on the Washington science-policy scene. Members of the staff he inherited described him as secretive, suspicious, and withdrawn—but almost all these staffers were soon gone. Graham shunned the press for about the first six months of his term, but has since given a number of interviews, mostly bland and platitudinous. A reporter for a major publication concluded after a long interview recently with Graham that he hadn't said anything worth reporting. Graham won't talk to SGR, and apparently has imposed the same silence on his staff.

The grapevine evaluation of Graham was actually on a slight upswing last summer as he emerged a bit from his self-imposed cocoon. Weight was given to the fact

(Continued on page 4)

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... Study Section Ratings Getting Better All the Time

(Continued from page 1)

sponded with "the assignment of better scores," as DRG calls it. In the NIH scoring system, where lower is better, the DRG reports "A steady annual increase in the proportion of RO1 applications with scores of 100 to 175 has occurred since 1979. Applications receiving these top scores increased by 15 percentage points—from 20.9 percent of approvals in 1979 to 36.2 percent in 1985. Two thirds of this increase occurred in applications with scores of 125 to 150"—which is near perfect. And DRG reports that the

Peer Review Trends is available without charge from Statistics and Analysis Branch, Division of Research Grants, NIH, Westwood Building, Room 1A-18, Bethesda, Md. 20892; tel. 301/496-7441.

grade inflation continues: "Recent data for 1986 indicate a further increase of scores 100-175 to 40.2 percent."

Further commenting on the performance of its reviewers, the DRG notes "a dramatic increase in the recommended approval of applications by study sections," the review bodies, staffed mainly by university-based scientists, that are at the heart of the NIH evaluation system. In 1975, only 8 percent of the study sections approved over 90 percent of their applications; by 1980, nearly one-fourth of the study sections were at that approval rate, and in 1985, three-fourths of the study sections were approving over 90 percent of the applications. The DRG attributes the remarkable shift to "earlier and more complete feedback to applicants on summary statements, better applications resulting from increased competi-

tion for funding, and an increase in amended applications."

The competition is especially difficult on new applicants, as compared with ongoing grantees seeking renewals. In 1975, the DRG figures show, 2200, or 32 percent, of new RO1 applicants "remained unfunded"; in 1985, the comparable figures were 7100, or 65 percent, of 11,000 applicants. But even the applicants for renewals were encountering stiff competition. In 1975, 700, or 26 percent, of 2700 renewal applications were unfunded. In 1985, the numbers were 2000, or 45 percent, of 4500. Among other items reported by the DRG:

- Applicants seeking 5 or more years of support "receive substantially better scores than those requesting fewer years. Poorest average scores are found on applications requesting support for only one or two years." The DRG says it's studying "the causes and explanations" for giving more to those who ask for more—but there's no mystery involved: All that's involved is the *chutzpah* effect, whereby the brazen prosper and the meek languish or perish.

- Among NIH's 11 institutes, the bottom three, or worst, in the golden 100-175 range were the National Institute of Environmental Health Sciences (16 percent), the National Institute on Aging (18 percent), and the National Institute of Dental Research (21 percent). The top three in 100-175 scores were the National Institute of General Medical Sciences (46 percent), the National Institute of Neurological and Communicative Disorders and Stroke (40 percent), and the National Institute of Allergy and Infectious Diseases (39 percent).

- MDs are in decline as a proportion of applicants for NIH grants; PhDs exceeded them by 2 to 1 in 1975,

(Continued on page 5)

OSTP

(Continued from page 3)

that Keyworth was a hard act to follow and the White House that Graham served was preoccupied with the Iran-contra scandals. Then, over the advice and protests of his own staff Graham wounded himself by decreeing that foreigners would be barred from the big national conference in July on commercialization of superconductivity. The exclusion was justified on the grounds that the US was not obliged to admit foreigners to a meeting intended to assist American competitiveness. Graham then relented by permitting foreign journalists to attend. But given the international character of both the science of superconductivity and many of the companies pursuing it, the foreign ban was absurd, especially since there can be nothing confidential in a meeting attended by thousands.

Science attaches at many of the embassies in Washington angrily protested to their journalist contacts, and Graham was widely depicted as a nationalistic churl working against the international spirit of science. July, when the conference was held, is getting to be a long time ago on the Washington agenda, but grouching about the Graham ban is still heard. Officials report that the episode continues to inspire anxious inquiries from abroad about America's intentions in scientific cooperation.

In asking around about Graham, the most sympathetic view offered to SGR came from a seasoned administrator who often deals with him on one matter or another. "Graham was not a good choice for the job," says that observer, "but he's there and he's gotten his bearings and is doing better."—DSG

Tale of Two Reagan Roles: AIDS vs. Superconductivity

Superconductivity and acquired immune deficiency syndrome are remote from each other on the spectrum of research problems. But, like most other scientific matters of our time, they exist in a political dimension, since Washington controls money and policy for research. The different responses accorded these problems by the Reagan administration provide a tale of values—and it's not a pleasant one.

The political response to superconductivity was swift, sure footed, and backed with money. It showed that government can move rapidly and sensibly—especially when Japan is pushing research in a hot field, huge problems remain to be solved, and the eventual market potential is in the billions.

In contrast, the Administration's response to AIDS has been indifferent and pennypinching and a debacle in leadership, culminating in the recent turmoil and resignations on the long-overdue President's Commission on AIDS. Created six years after the first AIDS cases were reported, the Commission is now in its fourth month, with its second chairman, and still hasn't done a thing.

In September 1986, the physics community erupted

with excitement when researchers at IBM Zurich reported they had devised material that allowed superconductivity at considerably higher temperatures than had previously been achieved. Further research raised the talk of room-temperature conductors, thus setting off a worldwide race inspired by visions of super-efficient electric vehicles, low-cost power transmission, a new electronics revolution, and endlessly on.

Ten months after the IBM discovery, some 1200 industrialists and researchers were summoned to Washington to hear Mr. Reagan announce an 11-point "Superconductivity Initiative" aimed at making America the leader in commercialization of the discovery. Mr. Reagan's plan called for a government-wide scientific effort, redeployment of budgets to finance the work, including \$150 million in the Pentagon, and appointment of a White House-based group of "Wise Men" to advise on policy. The US government's superconductivity program was off and running—within 10 months of the IBM announcement. It may turn out to be a sham program, as some members of Congress contend, but there is no doubt that superconductivity had engaged Mr. Reagan's imagination and he was eager to give it a strong presidential push.

Contrast that swift, confident, money-backed response with the years of indecision and indifference that sapped efforts to confront AIDS before it began a deadly spread that now totals over 40,000 cases and 22,000 deaths.

First reported in June 1981, AIDS elicited no political interest, despite ominous warnings from the Centers for Disease Control. Pleas for money to track the mysterious disease were countered with budget cuts and directives to reallocate funds that had been appropriated for syphilis-control programs. For the first five years of the spreading AIDS crisis, Mr. Reagan shunned any mention of the disease—let alone starring at a national conference on a federal response.

Year after year, to the present, the Administration has trimmed back the funding requests of the federal health agencies responsible for AIDS research. Congress has stepped in and provided funds—over the Administration's resistance. This year's Presidential budget plan for AIDS, calling for \$790 million for research, education, and treatment, is short by at least \$365 million, according to the General Accounting Office. The figures are debatable, but no independent experts consider the federal response adequate to the problem.

Without any central direction or council of "Wise Men," a la the superconductivity program, the federal effort remains uncoordinated and riddled with squabbles for turf and glory—normal and harmless in scientific affairs of no direct human consequence, but unthinkable and deadly in the AIDS epidemic.

(Continued on page 6)

NIH

(Continued from page 4)

and the ratio grew to 3 to 1 in 1985. The number of original (as distinguished from amended) applications from MDs rose from 2700 to only 3200 between 1975 and 1985, while applications from PhDs increased from 5600 to 8900. "The uncertainty of sustained research funding as well as the gap in earning potential," says the DRG, "are frequently cited for this lack of growth in physician investigators." But it notes some recent growth in award programs specially aimed at encouraging MDs to perform research.

- The applicants in competition for NIH grants are getting older. In 1979, 26 percent were 35 or younger; the proportion dropped to 18 percent in 1985. The DRG notes that "Recent 1986 data indicate a continuing decline in applicants under 36." But, it adds, "Ironically, it is the declining 26-to-35-year age group that receive the best scores and are the most successful in obtaining NIH funding."

- Institutions that get the most money from NIH tend to work harder at it and do better in getting still more money, the DRG reports. The top 20 in NIH grant support submitted an average of 200 applications per institution, compared to 125 for the second tier of 20. And the top group got generally better scores—with 30 percent of their applications rated at 100-175, compared to 20 percent for the runner-up group.

In Print: NSF Surveys, Learning Disabilities, and More

The following publications are obtainable as indicated—not from SGR.

A Guide to NSF Science/Engineering Resources Data (NSF 87-308, 285 pages), describes the 17 basic surveys that the National Science Foundation conducts to collect data on manpower and finances in R&D and related educational subjects. The surveys, many originating in the 1970s and conducted annually or biennially, include "Federally Employed Scientists and Engineers," "Earned Doctorates Awarded in the United States," "Scientific and Technical Personnel in Private Industry," and "Federal Support to Universities, Colleges, and Nonprofit Institutions." Included are the survey questionnaires and guides to dissemination of survey findings through NSF electronic systems, diskettes, and printed publications. Note: this volume only inventories the surveys; it does not present their findings.

Available without charge from NSF, Division of Science Resources Studies, 1800 G St. NW, Washington, DC, attn: Mrs. Elizabeth Michael; tel. 202/634-4622.

A Guide to Learning Disabilities: A Report to the US Congress, (230 pages), published and described by the Department of Health and Human Services as "the first comprehensive assessment of the prevalence, causes, diagnosis, treatment and prevention of learning disabilities." The report summarizes proceedings of a conference last January of 13 federal health agencies in the Congressionally mandated Interagency Committee on Learning Disabilities.

Available without charge from Office of Research Reporting, National Institute of Child Health and Development, PO Box 29111, Washington, DC 20040; tel. 301/496-5133. (The proceedings of the conference is scheduled for later publication.)

Forces Shaping the Future of the Engineer and the Engineering Profession (Publication No. AFO187, 124 pages), report for the American Society of Mechanical Engineers, by J. F. Coates, Inc., Washington consulting firm, predicts that "More engineers will be self-employed, employed by temporary agencies, by consulting companies, job shops, and other arrangements that allow engineers to be called in as needed." Also observes that "unlike lawyers, or doctors, or even managers, engineers are curiously invisible. The public does not ask their advice or the media show interest in the successes and problems of the engineering profession."

Available for \$18 for ASME members, \$30 for others, from ASME Service Center, 22 Law Drive, Fairfield, NJ 07007-2300; tel. 800 THE ASME.

To the Heart of the Matter—The Superconducting Super Collider (39 pages), slick brochure from Universities Research Association, the 56-member consortium that's the design contractor for the big machine; mainly a propaganda production aimed at equating the SSC with reverence for learning, it's nonetheless filled with basic data about the big machine. Sadly, though, it stoops to the threadbare, bringing in Faraday, responding to Queen Victoria's query about the utility of electricity: "Madam, of what use is a baby?" The difference is that this baby costs \$6 billion.

Available without charge from SSC/CDG, Mail Stop 90-4040, LBL, Berkeley, Calif. 94720; tel 415/486-6596.

11 AIDS Research Units Funded

Ten-million dollars for research on AIDS drugs has been awarded by the National Institutes of Health to 11 newly formed National Cooperative Drug Discovery Groups, raising the number of groups in the program to 16 and projected spending through 1992 to \$68 million.

The new awards, funded by the National Institute of Allergy and Infectious Diseases, are to research groups at Purdue, the US Army Medical Research and Development Command, U. of Texas Medical Branch (Galveston), Stanford Medical School, Biogen, U. of Miami School of Medicine, George Washington University School of Medicine, SUNY (Buffalo) School of Medicine, SUNY (Stony Brook) School of Medicine, U. of Alabama School of Medicine (Birmingham), City of Hope National Medical Center.

Reagan

(Continued from page 5)

Meanwhile, apart from a few gracious words, Mr. Reagan remains aloof from the AIDS crisis, withholding both presidential prestige and the necessary resources. The horror of bewildered children with AIDS being hounded from school is yet to evoke his otherwise hair-trigger moral outrage, though he's always an easy touch for a kid who needs a liver or heart surgery.

Mr. Reagan's Secretary of Education ridiculously propounds abstinence as the answer to AIDS, while his Surgeon General, who controls no money, wages a lonely campaign to educate the public in safe sexual practices.

How will history remember this President? Given his ignominious response to what could evolve into the greatest health crisis of modern times, Ronald Reagan could go into the books as the Epidemic President.—DSG

Applications Decline, but Med School Rolls Remain High

The lineup for admission to medical schools in the US is getting shorter, but there are still 1.8 applicants for each spot, according to the latest figures from the Association of American Medical College, which represents all 127 of the nation's medical schools.

Gradually occurring over the past few years, the decline in the applicant pool follows a 20-year period in which two to three applicants sought each opening. The figures may be somewhat misleading, since anyone who applies, regardless of qualifications, is entered as an "applicant." But in medical education circles—particularly in some of the less-prestigious state schools—the whispered reality is a sharp dropoff in qualified applicants. Meanwhile, some top-ranked schools report even more applicants than before, probably a reflection of higher aims by students who wouldn't have dared in the past.

The decline in applicants has so far had little effect on admissions, total enrollments, and graduations. The entering 1987 class is estimated at 16,000, a drop

of only about 100 from 1986, according to the AAMC. Total enrollment this year is projected at 64,800, compared with 66,125 reported last year. And the number of graduates this year totals 15,830, which is 287 below last year's figure, not too far off the historic peak, 16,343, of 1984.

The issue of whether too many doctors are coming out of too many medical schools is a highly sensitive one, but it is becoming difficult to avoid as professional overcrowding increases in many areas of the country. Also stirring interest in that subject is the well-established belief that the so-called doctor glut adds to zooming medical costs since doctors manage in one way or another to generate use of services and obtain substantial income. The subject is one of several to be examined by a newly formed AAMC Task Force on Physician Supply. Chaired by Daniel Tosteson, Dean of Harvard Medical School, the Task Force has held several organizing meetings for what is planned as a two-year study.

IEEE Starting Japanese Edition

A Japanese-language version of *IEEE Spectrum*, the monthly slick, semi-pop magazine of the Institute of Electrical and Electronics Engineers, is scheduled to begin publication in January in collaboration with Maruzen Co. of Tokyo, a leading publishing firm. The new edition will contain about 70 percent of the contents of the English-language version, with the balance consisting of articles and advertising originating in Japan. A startup circulation of 20,000 is estimated.

Ford Foundation Plans China Office

The Ford Foundation plans to open a field office in Beijing, China, in January, its first new Asian outpost in over 15 years. The office will be headed by Peter F. Geithner, Program Officer in charge of Ford's Developing Country Programs. Ford says the office will be responsible for "grants supporting exchanges between academic and professional institutions in China and their counterparts in the United States."

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Hughes Grants IOM \$5 Million

The total was \$10.5 million and counting when the October 1 SGR reported on rapid success in the endowment drive of the Institute of Medicine, long a pauper under the roof of the National Academy of Sciences. Since then, a grant for \$5 million has emerged from the bountiful Howard Hughes Medical Institute. In addition, Hughes granted the IOM \$600,000 to study high school biology curriculum. With all that money—and still more expected toward a \$20-million endowment target established less than two years ago—the IOM is on the way to being the national powerhouse for biomedical policy studies.

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Slow Pay Growth, Job Drop Reported in R&D Markets

Homage to research as a key to economic salvation routinely booms these days from the lecterns of political and industrial chiefs. But salary levels and trends in major disciplines show that the saviors come cheap and that demand for their services is actually lessening.

Over 1985-87, salaries have risen by an average of 3 to 4 percent—just a bit ahead of inflation—while job offers for newly minted BAs in scientific and technical fields declined by 25 percent from 1986 to 1987. The figures, along with gloomy analyses, appears in the latest edition of *Salaries of Scientists, Engineers and Technicians: A Summary of Salary Surveys*, produced by the Commission on Professionals in Science and Technology, a Washington-based observation post that's supported by many of the nation's major research-related societies. Using data derived from over 50 salary surveys, the Commission reports:

- Job offers for computer-science graduates have plunged 28 percent since last year, while average starting salaries have declined a bit, to \$26,364.
- For the biological sciences, there's relatively good news. Traditionally at the bottom of the pay ladder, this discipline experienced a whopping 14-percent increase in starting salaries, to \$21,816, and thereby rose to number 2. Anchor position is now filled by the agricultural sciences.
- Petroleum engineers have consistently ranked very high in the salary tables, and still do, with an average starting salary of over \$30,000. But, the Commission reported, the number of job offers has dropped by 82 percent and salaries went down by 6.6 percent, leaving average starting pay at \$30,816.
- Industry offers the best pay for doctoral scientists and engineers—a median of \$52,000—whereas "Teaching, the dominant work activity of doctoral scientists and engineers, continues to provide the lowest annual salary . . ."
- Starting salaries for men and women in the sciences tend to start out evenly—except in biology, where

the women lag by 11 percent. But men's salaries rise faster than women's and "Regardless of occupation—from managerial and professional to technical, sales and administrative support—women reported lower earnings than men in similar positions at similar experience levels."

The report, *Salaries of Scientists, Engineers and Technicians: A Summary of Salary Surveys*, (224 pages, 13th edition), by Eleanor L. Babco, is available for \$45 from the Commission on Professionals in Science and Technology, 1500 Massachusetts Ave. NW, Washington, DC 20005; tel. 202/223-6995.

The Commission also publishes *Manpower Comments*, a 10-times-a-year, wide-ranging digest of news and data about scientific, engineering, and technical manpower. Subscriptions for non-members are \$65 a year or \$7 per issue.

NSF Funds 2 Minority Centers

The National Science Foundation has inaugurated its Minority Research Centers of Excellence Program with \$1.5-million grants to Howard University, in Washington, DC, and Meharry Medical College, Nashville. Up to four additional awards in the program may be made this fiscal year, NSF says.

The grants, for 18 months, are downpayments on five-year awards that are expected to total \$5 million each. Howard will use the funds to support a Materials Science Research Center; Meharry's will go to a Cellular and Molecular Biology Research Center.

The Centers program, one of several at NSF focused on minorities, received a strong sendoff from NSF Director Erich Bloch. He has been sounding alarms about the importance of steering minority group members and women into science to compensate for what he sees as a fast-coming, demographically induced manpower shortage in science.

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